



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,523	03/30/2001	Donald R. Parris	C0002	1075

21495 7590 12/17/2003

CORNING CABLE SYSTEMS LLC  
P O BOX 489  
HICKORY, NC 28603

EXAMINER

KANG, JULIANA K

ART UNIT PAPER NUMBER

2874

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/822,523	PARRIS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Juliana K. Kang	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27, 29-42 and 44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27, 29-42, 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

1. Applicant's communication filed on October 7, 2003 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims are not persuasive. Applicant's amendment necessitated the new ground(s) of rejection, thus this action is made final.
2. The Examiner agrees with the applicant's arguments regarding the 112 rejections and applicant also amended claims 1 and 17 to overcome the 112 rejections. Thus, all the 112 rejections are withdrawn.

***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 1- 5, 7-9, 11, 13-23, 26, 28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Heinz et al (WO99/53353, submitted by applicant).**

Regarding claim 1, Heinz et al disclose a fiber optic cable comprising a strength member (IS, an inner strength member) in a tubular shell form having at least one fiber access opening (ISP) leading to a formed area, at least one optical fiber component (LW1..LWn) and a cable jacket (AM) generally surrounding the strength member (AS). Heinz et al teach that the inner strength member is inserted to an outer strength member (AS) (see page 3 lines 18-22), fitted, or seated with a snug fit. This means that the outer strength member can be removed without disturbing (breaking) the inner

Art Unit: 2874

strength member. Thus, the fiber can be accessed at the fiber access opening without substantially disturbing the strength member.

Regarding claims 2, 3 and 11, Heinz et al disclose that the strength member is made from a strip-shaped metal foil having a substantially uniform thickness (see page 19 lines 9-20).

Regarding claims 4 and 5, Heinz et al disclose that the strength member's thickness is expediently chosen between 0.1 and 1mm. Heinz et al also teach having different thickness or material for the cable elements. Choosing expedient thickness of cable elements would inherently provide the cable with a non-preferential or preferential bend characteristic depending on the thickness of the cable element chosen.

Regarding claims 7 and 8, Heinz et al show U-shaped with a generally flat bottom portion in Fig. 5.

Regarding claim 9, Heinz et al show a cross-sectional area of the cable being generally non-circular (see Figs. 6 and 7).

Regarding claim 13, Heinz et al disclose that the jacket may be a single-layer or multi-layer structure. Thus, when Heinz et al's jacket is a multi-layer structure, it includes an interfacial layer between the strength member and the outer jacket layer.

Regarding claims 14-16, Heinz et al disclose the fibers placed in a decoupling zone (chamber, KK2 [formed area]) filled with a water-blocking component (FM)(see page 25 lines 10-15).

Regarding claims 17-23, 28, 30, and 31, as described above, Heinz et al disclose the claimed optical fiber cable.

Regarding claim 26, Heinz et al disclose an interstice (gap on the bottom) filled with the jacket material (see Fig. 2).

**6. Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimmich et al (U.S. Patent 4,852,966, submitted by applicant).**

Regarding claim 1, Kimmich et al disclose an optical fiber cable comprising a corrugated sheet (strength member (4)) having fiber access openings (open-side of grooves) for optical fibers (5) with a formed area (grooves) and a cable jacket (2, 3) generally surrounding the strength member (4). Kimmich et al's fibers (5) can be accessed at the fiber access opening without substantially disturbing (breaking) the strength member when the cable jacket is removed.

Regarding claim 17, Kimmich et al disclose a water-blocking component (6) (see column 2 lines 3-8), a decoupling zone (grooved area where the fiber is located) disposed in the formed area and an interfacial layer (6) disposed between an outer surface of the strength member and the cable jacket.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**8. Claims 10, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz et al as applied to claims 1 and 17 above, and further in view of Fitz et al (U.S. Patent 6,137,936).**

As described above, Heinz et al disclose the claimed optical cable except indicia. Fitz et al teach an optical fiber cable with a jacket including indicia to make the position of the strength member readily apparent from the external of the cable. Fitz et al further teach that the indicia, preferably, is a ridge or groove on or in a portion of the jacket surface. Heinz et al's cable also includes strength member (ZE1, ZE2, in Fig. 2), thus it would have been obvious to one with ordinary skill in the art at the time the invention was made to use indicia in Heinz et al as taught by Fitz et al to mark the cable elements that are embedded in the cable for easier recognition when it is desired to expose the optical cable elements.

**9. Claims 12, 27 and 32-44 rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz et al.**

Regarding claims 32-41, 43 and 44, as described above, Heinz et al disclose the claimed optical fiber cable except the strain values of the cable for different tensile forces. Heinz et al teach the strength member material and the thickness that are same or similar to the applicant. For example, Heinz et al's the strength member is made of metallic material and the thickness of the strength member is in the range of 0.1mm and 2mm while applicant's strength member is made of metallic material and the thickness is in the range of 0.25mm and 2mm. Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Heinz et al's

strength member thickness or material to obtain any desired strain values including the applicant's claimed strain values, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 12, 27 and 42, as described above, Heinz et al teach the claimed invention including a metallic sheet and a cable-filling compound. However, Heinz et al do not explicitly teach a central electrical conductor surrounded by a dielectric material. Heinz et al teach that the cable is used for electrical and/or optical telecommunication cable (see page 20 lines 6-9). Thus, even though Heinz et al do not positively teach an electrical conductor placed in the formed area, it would have been obvious to one with ordinary skill in the art to use an electrical conductor, and to place the electrical conductor in the formed area to provide extra protection for the electrical conductor by placing them inside the strength member. Use of a dielectric material would have been also obvious to provide the insulation for the electrical conductor from the metal strength member.

**10. Claims 6 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmich et al (U.S. Patent 4,852,966, submitted by applicant).**

Regarding claims 6 and 29, as described above Kimmich et al disclose the claimed invention except the V-shaped formed area. Kimmich et al states that the strength member is a corrugated sheet. The term "corrugate" means to shape into folds or parallel and alternating ridges and grooves. Even though Kimmich et al only show generally U-shaped formed area, it would have been obvious to one with ordinary skill in

Art Unit: 2874

the art to recognize the V-shaped formed area (ridge) as another shape of formed area. It is also noted that applicant does not provide the criticality of a V-shaped formed area.

### ***Conclusion***

4. Applicant's arguments with respect to claims 1-27 and 29-42 and 44 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (703) 305-6259. The examiner can normally be reached on Mondays and Thursdays 7:00-4:30.




Application/Control Number: 09/822,523

Page 8

Art Unit: 2874

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3072.

  
Juliana Kang  
December 4, 2003

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER